

DEC 28 2005

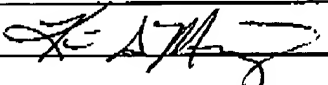
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PTO/SB/33 (07-05)

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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional)  120768 (GEMS 0135 PUS)	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>December 28, 2005</u> Signature  Typed or printed name <u>Kevin G. Mierzwa</u>		Application Number  09/682,934	Filed  11/01/2001
First Named Inventor  Gopel B. Avinash		Examiner  Patel	
Art Unit  2621		Examiner  Patel	

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).  
Note: No more than five (5) pages may be provided.

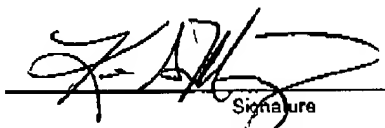
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

☒ attorney or agent of record.  
Registration number 38,049

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

  
 Signature  
Kevin G. Mierzwa  
 Typed or printed name  
248-223-9500  
 Telephone number  
December 28, 2005  
 Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ \*Total of \_\_\_\_\_ forms are submitted.

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gopel B. Avinash

Serial No.: 09/682,934

Group Art Unit: 2621

Filed: November 1, 2001

Examiner: Patel, Shefali D.

For: METHOD FOR CONTRAST MATCHING OF MULTIPLE IMAGES OF  
THE SAME OBJECT OR SCENE TO A COMMON REFERENCE  
IMAGE

Attorney Docket No.: 120768 (GEMS 0135 PUS)

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on:

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*Jo Anne Croskey*  
Signature

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Applicant respectfully requests a Pre-Appeal Brief Request for Review in view of improper rejections based upon errors and fact of the Examiner's rejection. Claim 1 is directed to a method of contrast matching a first image and a second image. This is set forth in the preamble of the present application. Applicant respectfully submits that the Examiner fails to allege that either of the references performs contrast matching.

Claim 1 recites generating an image ratio of the first image and the second image, said ratio having a numerator and a denominator. The Examiner cites that Bruijns reference col. 6, lines 35-47 for contrast matching a first image and a second image. It should be noted that the Bruijns reference is not adjusting contrast but is

U.S.S.N. 09/682,934

2

120768 (GEMS 0135 PUS)

adjusting brightness. Those skilled in the imaging art will recognize that brightness and contrast are very different parameters. A ratio is defined in the Bruijns reference with pixal averaging, but the Bruijns reference does not teach regularizing the ratio. This is due to the fact that they are adjusting the brightness and not the contrast of the signals. As set forth in col. 6, lines 35-67, the ratio is of the first mean and the second mean and not of the images themselves. Therefore, Applicant respectfully believes that the Examiner has made an error with respect to this fact.

Because the claim further states regularizing the image ratio by adding a constant to the numerator to form a regularized image ratio, and the fact that an image ratio does not exist in the Bruijns reference, the Examiner had erred in determining that this step also exists. The Examiner points to the Bolorforosh reference for regularizing image ratio by adding a constant to the denominator. Applicant admits that the Bolorforosh reference does teach regularizing a ratio by adding a non-zero constant to the denominator. However, the ratio set forth is the ratio of the fundamental receive signal to the harmonic receive signal and is not the ratio of a first image and a second image. Rather, the ratio is a ratio of the fundamental and harmonic frequencies. Column 4, lines 16-17, of the Bolorfrosh reference emphasizes this point. This paragraph states that in step 64, the ratio signal is formed as a function of the fundamental and harmonic receive signals. Then, the image signal is generated as a function of the signal ratio R. This is very different from the step set forth in claim 1 in that the image ratio is set forth and not a ratio. The Examiner reiterates that in the Advisory Action in the last paragraph by stating that the ratio (Bolorfrosh) is computed for these two signals, which would be the same as the two images in Bruijns. Applicant respectfully submits that the fundamental and harmonic frequencies are not the same as the images themselves. Therefore, Applicant respectfully believes that the Examiner has erred in his rejection regarding the regularizing the image ratio.

In the Final Office Action, the Examiner states on line 4 of page 3 filtering the regularized image ratio to form a filtered ratio. Although the Bruijns reference describes a filter in col. 7, lines 15-23, no teaching or suggestion is provided for filtering an image ratio. That is, no teaching or suggestion is provided in the Bruijns

U.S.S.N. 09/682,934

3

120768 (GEMS 0135 PUS)

reference for a ratio of the first image and a second image after they have been regularized. In fact, the Examiner specifically states that regularizing is not performed in the Bruijns reference. Therefore, filtering the regularized image ratio can also not be performed in the Bruijns reference. Therefore, Applicant respectfully believes the Examiner has erred with respect to the step of "filtering the regularized image ratio to form a filtered ratio." This step does not exist in the art cited. The last step is "multiplying the second image by the filtered ratio to form an adjusted image." Applicant respectfully submits that this step performs the contrast matching of a first image and a second image. Because neither of the two references performs contrast matching, this step cannot exist. The Examiner points to multiplying image S2 by the quotient at col. 7 lines 15-23. As mentioned above, regularizing the image ratio and filtering the image ratio is not performed in the Bruijns reference. Therefore, multiplying the second image by the filtered ratio to form an adjusted image (wherein the filtered ratio is formed first by regularizing then by filtering the image ratio of two images). Therefore, this step also cannot exist in the Bruijns reference nor is it taught or suggested in the Bruijns or Bolorforosh references. Applicant submits this is an error of fact by the Examiner

Claims 10 and 18 also teach an image ratio of the first image and second image regularizing the image ratio and filtering the regularized image ratio to form a filtered ratio. Claim 10 also recites multiplying the second image by the filtered ratio to form an adjusted image. As mentioned above, these steps are in claim 1 and are not taught therein. Therefore, Applicant respectfully requests the panel to reverse the Examiner's decision with respect to claim 10 as well.

Claim 18 is similar to claims 1 and 10 but in context of an imaging system. Claim 18 also described ratio of the first image and second image filtering the regularized image ratio multiplying the second image by the filtered ratio to form an adjusted image.

In summary, Applicant respectfully submits that neither of the references teach or suggest the ratio of two different images. After the ratio of the image is performed, the ratio is regularized. No teaching or suggestion is found in either reference for regularizing a ratio of two images. Once the ratio is regularized, the

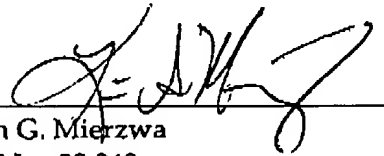
U.S.S.N. 09/682,934

4

120768 (GEMS 0135 PUS)

regularized image ratio is filtered to form a filtered ratio. This is also not taught or suggested in the references. Multiplying the second image by the filtered ratio to form an adjusted image forms the contrast matching and is not set forth in either of the two references. Therefore, Applicant respectfully requests the panel to reverse the Examiner's position with respect to each and every one of the claims based upon the errors of fact described above. Should the panel have any questions regarding this matter, please contact the undersigned.

Respectfully submitted,  
ARTZ & ARTZ, P.C.



Kevin G. Mierzwa  
Reg. No., 38,049  
28333 Telegraph Road, Ste. 250  
Southfield, MI 48034

Date: December 28, 2005